

APPARATUS HAVING MOVABLE DISPLAY AND METHODS OF OPERATING SAME

[0001] This application claims the benefit of priority of U.S. Provisional Patent Application Serial No. 60/383,059, filed May 23, 2002, entitled "VIDEO WRAPPED REELS", the entirety of which is incorporated by reference herein for all purposes.

BACKGROUND

[0002] Reeled slot machines are a very significant source of revenue for casinos. Reeled slot machines are slot machines that typically depict symbols along a plurality of reels that spin in response to a player initiation of a game. If, when the reels stop spinning, a predetermined combination of symbols (e.g., one respective symbol on each reel) is displayed along a payline of the slot machine, the player is provided with a monetary prize (typically referred to as a payout).

[0003] Up until fairly recently, reeled slot machine were exclusively of the mechanical reel type. Mechanical reel slot machines typically include a plurality of mechanical reels behind a transparent glass partition. A reel strip is located along the outer periphery of each reel. The reel strips each depict a plurality of symbols along their length. The transparent glass partition has depicted thereon at least one payline. A stepper motor controls the motion of each reel and causes the reel to stop such that a desired one of the symbols depicted on the reel strip is displayed along the payline. A player initiates the movement of the reels by actuating a button or pulling a designated handle of the slot machine.

[0004] In the last two decades, however, significant changes have been made in the components of reeled slot machines. One change has been a movement to simulated reels in lieu of mechanical reels. Slot machines that include a video screen that depicts a graphical representation of a plurality of reels (rather than including mechanical reels) are often referred to as video slot machines. A video slot machine includes a display device on which is displayed data representing a plurality of reels. A simulation of the rotation of the reels is displayed on the display device in response to a player initiation of a game. A program executed by a process of the video slot machine determines which symbols to display on the simulated reels.

[0005] The video slot machines offer significant advantages to the casino over the mechanical reels. For example, they provide the casino with the flexibility of changing the symbols displayed on the simulated reels (e.g., thus easily and quickly changing or updating the game offered on the slot machine). Additionally, they allow the casino to display messages in addition to the symbols of the game (e.g., marketing messages). Further, the displays of video slot machines can depict animation sequences and exciting graphics that cannot be duplicated on the mechanical reels. The video reel slot machines also offer flexibility in that they do not require extra hardware for implementing bonus features because the same display used for the primary game can also be employed to display bonus game graphics.

[0006] However, there still remains a significant segment of slot machine players who prefer to play mechanical reel slot machines and who avoid playing video slot machines. Some such players prefer the mechanical reel slot machines

due to feelings of nostalgia for the look and feel of traditional slot machines. Some older slot machine players are intimidated by the video-game-like appearance of the video slot machines. Some players perceive that their chances of obtaining a winning outcome on a mechanical reel slot machine are better because they have a better "feel" for the number of symbols depicted around the periphery of each reel and therefore perceive that they know the odds of each symbol appearing on a payline. In a video slot machine, these latter players feel that they have no way of getting a feel for how many symbols, or how many occurrences of each symbol, appear on each reel (since there is no reel) and are therefore distrustful of the odds of such machines.

[0007] Irrespective of the varied reasons, it remains true that a significant number of players prefer to play mechanical reel slot machines to video slot machines. It also remains true that video slot machines offer significant advantages to a casino over mechanical reel slot machines. Accordingly, a need exists for a slot machine that allows a casino to realize the benefits of video slot machines while attracting to the slot machine the players who prefer to play mechanical reel slot machines.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 is a front planar view of a slot machine, in accordance with one or more embodiments.

[0009] FIG. 2 is a block diagram of a slot machine, in accordance with one or more embodiments.

[0010] FIG. 3A is a diagram of one conventional shape of a reel, which may be used in one or more embodiments of the present invention.

[0011] FIG. 3B is a plan view of one embodiment of a reel assembly.

[0012] FIG. 4 is a schematic diagram of one embodiment of a reel assembly.

[0013] FIG. 5 is a diagram of one embodiment of a reel assembly.

[0014] FIG. 6 is a plan view of a plurality of display devices that each have a curved shape resembling a portion of a shape of a reel, consistent with one or more embodiments of the present invention.

[0015] FIG. 7 is a plan view of a display device assembly that includes two rotating surfaces, consistent with one or more embodiments of the present invention.

[0016] FIG. 8 is a plan view of a display device assembly that includes a mirrored surface, consistent with one or more embodiments of the present invention.

[0017] FIG. 9 is a table illustrating an exemplary data structure of an indicia database, for use in one or more embodiments of the present invention.

[0018] FIG. 10 is a table illustrating an exemplary data structure of a surface location database, for use in one or more embodiments of the present invention.

[0019] FIG. 11 is a flow chart illustrating an exemplary process according to an embodiment of the present invention.